

# Plant Leaf Disease Detection and Suggesting Medication using Image Processing and Convolutional Neural Network Techniques

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**Abstract:** *In day-to-day life many factors that affect plants. Many problems are occurring at a rapid pace and new diseases are rapidly being identified. In today's world of pollution and soil quality, disease detection is essential and its supplement is required to protect the plants. The main motivation of doing this project is to present a disease prediction model for the prediction of occurrence of plant crop disease. Further, this research work is aimed towards identifying the best classification algorithm for identifying the possibility of disease in plants.*

*The identification of the possibility of disease in plants is complicated task for practitioners because it requires years of experience and intense tests to be conducted. The main objective of this significant research work is to identify the best classification algorithms suitable for providing maximum accuracy when classification of normal and abnormal plants is carried out.*

*Convolutional neural network (CNN) architecture is used to map the relationship between the indoor PM and weather data to the found values. The proposed method is compared with the state-of-the-art deep neural network (DNN) based techniques in terms of the root mean square and mean absolute error accuracy measures. The applied CNN classification helps to predict the heart disease with more accuracy in the new data set. The coding language used is Python 3.10..*

**Keywords:** Diseases, Machine Learning, Image Processing, Convolutional neural network, Deep Learning, Medication.